

Attorney Docket No.: 2001P12800US01
Application No. 10/705,795

Amendments to the Claims begin on page 3 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendment to the Claims:

Please amend the claims as follows:

24. (currently amended): A light-emitting device comprising:
a plurality of electrode layers, including an anode layer and a cathode layer;
an electro-luminescent organic layer disposed between the anode and cathode layers; and
a poly-siloxane insulating structure separating the electro-luminescent organic layer into a plurality of light-emitting elements,
wherein, prior to drying, the electro-luminescent organic layer is initially deposited from solution using wet-chemical techniques that includes an organic material and a solvent, and wherein the poly-siloxane insulating structure minimizes the organic material clinging to sides of an aperture.

Claims 25-26 (canceled)

27. (previously presented): The device of claim 24 wherein at least one electrode layer is configured to independently address at least one aperture of the poly-siloxane insulating structure as a display pixel, and wherein each of the at least one electrode layer is coupled to a corresponding transistor.
28. (previously presented): The device of claim 24 wherein the poly-siloxane insulating structure forms a bank structure that insulates the plurality of light-emitting elements from each other.

Attorney Docket No.: 2001P12800US01
Application No. 10/705,795

29. (previously presented): The device of claim 24 further comprising one or more insulating strips on the poly-siloxane insulating structure, and wherein at least one insulating strip comprises an overhanging portion or a base portion or both.

30. (previously presented): The device of claim 29 wherein the at least one insulating strip comprises poly-siloxane material in one or both of the overhanging portion and the base portion.

31. (currently amended): A method of fabricating a light-emitting device, the method comprising:

forming a first electrode layer on a substrate;

forming on the first electrode layer a poly-siloxane bank structure having apertures;

depositing from solution using wet-chemical techniques one or more organic layers into the apertures of the poly-siloxane bank structure; and

forming a second electrode layer such that the one or more organic layers deposited into the apertures are disposed between the first and second electrode layers,

wherein the poly-siloxane insulating structure minimizes an amount of an organic material clinging to sides of an aperture.

32. (previously presented): The method of claim 31 wherein the wet-chemical techniques comprise spin-casting, dip-coating, screen printing, flexo printing, or ink-jet printing.

Claim 33 (canceled)

34. (previously presented): The method of claim 31 wherein depositing one or more organic layers comprises depositing an electro-luminescent organic layer.

35. (previously presented): The method of claim 31 further comprising patterning the poly-siloxane bank structure to separate the light-emitting device into a plurality of pixels.

Attorney Docket No.: 2001P12800US01
Application No. 10/705,795

36. (previously presented): The method of claim 31 wherein the poly-siloxane bank structure is formed before the one or more organic layers are deposited.

37. (previously presented): The method of claim 31 further comprising forming one or more insulating strips on the poly-siloxane bank structure.

38. (previously presented): The method of claim 37 wherein the one or more insulating strips are formed on the poly-siloxane bank structure between apertures.

39. (previously presented): The method of claim 38 wherein the at least one insulating strip comprises an overhanging portion or a base portion or both.

40. (previously presented): The method of claim 39 wherein the at least one insulating strip comprises poly-siloxane in one or both of the overhanging portion and the base portion.

41. (currently amended): An organic light-emitting device (OLED) comprising:
a plurality of light-emitting elements, each light-emitting element comprising an organic electro-luminescent layer disposed between electrodes; and
at least one structure comprising poly-siloxane material, wherein the structure is configured to separate elements of the OLED,
wherein, prior to drying, the electro-luminescent organic layer is initially a formed by depositing solution using wet-chemical techniques that includes an organic material and a solvent, and wherein the poly-siloxane structure is non-wetting thus minimizing the organic material clinging to sides of an aperture and the poly-siloxane structure has a curing temperature below 250°C wherein the organic electro-luminescent layer is formed by depositing solution using wet-chemical techniques.

Claims 42-43 (canceled)

Attorney Docket No.: 2001P12800US01
Application No. 10/705,795

44. (previously presented): The OLED of claim 41 wherein the at least one structure comprises a poly-siloxane bank structure configured to separate light-emitting elements from each other.
45. (previously presented): The OLED of claim 44 wherein the poly-siloxane bank structure includes apertures into which light-emitting elements are arranged.
46. (previously presented): The OLED of claim 44 wherein the poly-siloxane bank structure physically and electrically insulates the light-emitting elements from each other.
47. (previously presented): The OLED of claim 41 further comprising one or more insulating strips on the at least one structure.
48. (previously presented): The OLED of claim 47 wherein the at least one insulating strip comprises an overhanging portion or a base portion or both.
49. (previously presented): The OLED of claim 48 wherein the at least one insulating strip comprises poly-siloxane material in one or both of the overhanging portion and the base portion.